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a work of the late Dr. Cheyne, on a Deranged State of the Faculty of communicating by Speech or Writing.*

Dr. Allman read a paper “on a New Genus of Hydra-form Zoophytes.”

The author discovered the animal on which he founded the new genus in the Grand Canal near Dublin, in October, 1842. The genus of which this zoophyte constitutes as yet the only known species, will find a place in the family of the *tubulariadae*, and occupies a position between *coryne* and *tubularia*, differing from the former in the possession of a polypedome, and from the latter in the scattered arrangement of its tentacula. The tentacula, as in both the last mentioned genera, are filiform; and in this character a point of distinction is at once found between the new genus and *Hermia*, Johnst.

To the new zoophyte Dr. Allman assigned the name *Cordylophora lacustris*.

May 22.

SIR W^M. R. HAMILTON, LL.D., President, in the Chair.

Right Hon. the Earl of Dunraven was elected a member of the Academy.

Dr. Osborne read some observations on the deprivation of the faculty of speech while the intellect remains entire, and in which the defect does not arise from paralysis of the vocal organs. The communication was intended as a sequel

* This work having been since published, the extracts are not here given.

to Dr. Cheyne's observations read at the last meeting, and was chiefly intended to refer to a case published by Dr. Osborne, which afforded some peculiar opportunities of investigating the nature of this affection.

The subject of this case was a gentleman of about 26 years of age, and of very considerable literary attainments. He was a Scholar of Trinity College, and also a proficient in the French, Italian, and German languages. When residing in the country, one morning, after bathing in a neighbouring lake, he was sitting at breakfast, when he suddenly fell in an apoplectic fit. A physician was immediately sent for, and after being subjected to the appropriate treatment, he became sensible in about a fortnight. But although restored to his intellects, he had the mortification of finding himself deprived of speech. He spoke, but what he uttered was quite unintelligible, although he laboured under no paralytic affection, and pronounced a variety of syllables with the greatest apparent ease. When he came to Dublin his extraordinary jargon caused him to be treated as a foreigner in the hotel where he stopped; and when he went to the College in quest of a friend he was unable to express his wish to the gate-porter, and succeeded only by pointing to the apartments which his friend had occupied. The circumstance of his having received a liberal education, and his tractable disposition, rendered this case peculiarly favourable for ascertaining the true nature of the affection, and the result of Dr. Osborne's observations during several months were as follows:

1. He perfectly comprehended every word said to him, and his conduct and habits were those of a man in a sound state of mind, and were exactly those which his friends stated to be peculiar to him before the seizure. He had no paralysis, and the motions of his mouth and tongue were executed with the force and rapidity of ordinary health.

2. He perfectly comprehended written language. He continued to read his newspaper every day, and when passing events were spoken of, proved that he had a clear recollection of all that he read. Having procured a copy of Andral's Pathology in French, he read it with great diligence, having lately intended to embrace the medical profession.

3. He expressed his ideas in writing with considerable fluency, and when he failed it appeared to arise merely from the want of the association with spoken language, which caused confusion and uncertainty, the words being orthographically correct, but frequently not in their proper places. He translated Latin sentences accurately, and also wrote correct answers to historical questions.

4. His knowledge of arithmetic was unimpaired, he added and subtracted numbers of different denominations with uncommon readiness; also played well at the game of drafts.

5. His recollection of musical sounds appeared to be unimpaired, for when the tune of Rule Britannia was played he pointed to the shipping in the river.

6. His power of repeating words after another person was almost confined to certain monosyllables; and in repeating the letters of the alphabet he could never pronounce *k, q, u, v, w, x, and z*, although he often uttered those sounds in attempting to pronounce the other letters. The letter *i* also he was very seldom able to pronounce.

7. In order to ascertain and place on record the peculiar imperfection of language which he exhibited, the following sentence from the By-laws of the College of Physicians was selected, viz. "*It shall be in the power of the College to examine or not examine any Licentiate previously to his admission to a Fellowship, as they shall think fit.*" Having set him to read this aloud, he read as follows: "*An the be what in the temother of the trothotodoo to majorum or that emidrate ein einkrastrai mestreit to ketra totombreidei to ra fromtreido as that kekistret.*" The same passage was presented to him in

a few days afterwards, and he then read it as follows : “ *Be mather be in the kondreit of the compestret to samtreis amtreit emtreido am temtreido mestreitererso to his eftreido tum bried rederiso of deid dat drit destrest.* ”

We observe here those monosyllables which are of most frequent use in our language, as *the, be, what, in, that, his,* and *was*, along with several syllables almost peculiar to the German language, which he was engaged in studying at the time of the apoplectic seizure ; but the main feature in the case was, that although he knew when he spoke wrong, yet that he was unable to speak right, notwithstanding he articulated very difficult and unusual syllables.

As in this case the recollection of the meaning of words was retained, and it was proved that there was no paralytic affection interfering with pronunciation, but that even in the act of endeavouring to imitate another person, he could not pronounce the right word, Dr. Osborne concluded that the affection was not (as has been usually described) a loss of the faculty of language or of the memory of names, while the memory of things remains, but that it consisted in *a loss of the recollection how to use the vocal apparatus.*

In stammering it is obvious that the patient knows the mode in which the word is to be pronounced ; he begins it rightly, but is prevented from finishing it by debility or spasm on the part of the muscles, causing them to resist his efforts. In this patient, on the contrary, the words which he could write, and understood perfectly, he was unable to commence the first syllable of, and instead of them uttered words compounded from other languages. His ear afforded him very little assistance, as his attempts to repeat what had been read were scarcely better than his reading. The organs were not paralysed, neither were they affected by spasm, nor was he ignorant of the sounds to be uttered : it only remains then that he was ignorant of the art of pro-

ducing those sounds, and as he was previously in possession of this art, we are justified in asserting that he forgot it.

It may appear unaccountable why we should be liable to forget the use of the vocal organs, but never forget the use of the other voluntary muscles. Thus while we have those instances of persons pronouncing one word when they intended another, we have no instance of an individual running when he wished to stand, or leaping when he wished to sit down. This, however, admits of being adequately explained, by the nerves concerned in the muscular apparatus of speech being derived from the brain and highest portions of the spinal cord, and consequently liable to be disturbed by apoplectic affections; while the nerves of the limbs being derived from the cervical plexus, or lower portions of the spine, are unaffected, except by such causes as may produce paralysis.

Dr. Osborne referred to the *Ephimerides Curiosæ* for a case in which the art of writing was retained, while that of speaking was lost; and also alluded to that of Zacharias in the Sacred Scriptures, who, although deprived of speech, is related to have written "The child's name is John."

Those instances which have been recorded of persons after wounds or apoplectic seizures ceasing to speak their usual language, and resuming the use of some other language with which they had been familiar at a former period, appear to be of the same nature as the present. The recollection of one language, and its train of associate actions being lost, it was most probable that the vocal organs should move in that train to which they had formerly been accustomed, and fall into the use of another language. It is highly probable that a similar occurrence would have taken place in this patient if he had only cultivated one language besides English, but having been conversant with five languages, the muscular apparatus ranged among them, forming a kind of polyglot jargon, which was formed without any rule, was inconsistent with itself, and wholly unintelligible.

Although Dr. Osborne did not enter upon the medical treatment of the case, yet he considered that the effect of the plan adopted to recover his speech afforded an additional proof that this patient had not lost the faculty of language, but only the art or *knack* of speaking. He commenced learning to speak *de novo* like a child, by repeating after another person first the letters of the alphabet, and subsequently words. This was a very laborious task. Sometimes he was able to pronounce words which at other times he found impracticable, but his progress may be estimated by his repeating after another the same By-law of the College of Physicians in the following terms: "*It may be in the power of the College to enhavine or not ariatin any Licentiate seviously to his amission to a spolowship as they shall think fit.*" A month or two afterwards he repeated the same By-law perfectly well, with the exception of the word *power*, which on this occasion he called *prier*. This gentleman soon afterwards went to the country, where in a few months he was carried off by a fever, and Dr. Osborne learned no further particulars respecting him after he left Dublin.

Sir William Hamilton remarked that Dr. Robinson's mean refractions, published in the second Part of the Nineteenth Volume of the Transactions of the Academy, might be represented nearly by the formula,

$$R = 57,546 \tan (\theta - 4'' \times R); \quad (1)$$

or by this other formula,

$$R \cot \theta + R^2 \sin 3'',8 = 57,346; \quad (2)$$

R being the number of seconds in the refraction corresponding to the apparent zenith distance θ , when the thermometer is 50° , and the barometer 29,60 inches.

The first formula seems to give a maximum positive deviation from Dr. Robinson's Table, of about a quarter of a second, at about 80° of zenith distance; it agrees with the